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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,395	09/05/2003	Joel Jameson	4000735.0022	8538
34755	7590	07/05/2005	EXAMINER	
ADAM K. SACHAROFF MUCH SHELIST FREED DENENBERG AMENT&RUBENSTEIN,PC 191 N. WACKER DRIVE SUITE 1800 CHICAGO, IL 60606-1615				BAYAT, BRADLEY B
ART UNIT		PAPER NUMBER		
		3621		
DATE MAILED: 07/05/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/656,395	JAMESON, JOEL
Examiner	Art Unit	
Bradley B. Bayat	3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 14 April 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 7 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 7 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

This communication is in response to applicant's response and amendment of claim 17 filed on 14 April 2005. Thus, claim 17 remains pending.

### ***Response to Arguments***

Applicant's arguments filed April 14, 2005 have been fully considered but they are not persuasive.

Applicant argues against the rejection by citing various portions of the MPEP and the 35 USC 101 code. Applicant mainly argues that the rejection under 101 cannot be understood since the claims recite utilizing a computer and therefore within the technological arts and not an abstract idea (response pages 3-4).

The examiner has consulted with the 101 panel and the rejection is maintained. In the present case, claim 17 only recites an abstract idea. The recited steps of obtaining scenarios, optimizing at least one resource allocation in each scenario, storing results, obtaining an allocation and evaluating the allocation does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to optimize resource allocations.

In other words, applicant's claim merely recites a process to accomplish a task with no eventual outcome. The eventual determined valuation result is merely passed "to a computer program routine for subsequent handling." Therefore, all previous steps were just abstract ideas that a user could have separately gathered and finally just inputted onto a computer. Applicant's claimed invention clearly not within the technological arts.

Furthermore, Cheng et al does not explicitly disclose passing the result of said evaluation to a computer program routine for subsequent handling. However, Cheng et al does disclose that the results are subsequently displayed to the user (Col. 13 line 55-Col. 14 line 30 and Table 11). Thus, examiner submits that it would have been obvious to one of ordinary skill in the art at the time of applicant's invention that Cheng et al discloses a computer program routine for subsequent handling such as displaying the results to the user. The rejection is maintained.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claim 17 only recites an abstract idea. The recited steps of obtaining scenarios, optimizing at least one resource allocation in each scenario, storing results, obtaining an allocation and evaluating the allocation does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to optimize resource allocations.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps are directed to anything in the technological arts as explained above with the exception of the recitation in the preamble that the method is "computer implemented" and further the recitation of a computer program routine for subsequent handling. Looking at the claim as a whole, nothing in the body of the claim recites any structure or functionality to suggest that a computer performs the recited steps. Therefore, the preamble is taken to merely recite a field of use. The computer program recited in the claim merely receives a result of the evaluation without carrying out any subsequent processing based on the result.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. An invention, which is eligible or patenting under 35 U.S.C. 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The fundamental test for patent

eligibility is thus to determine whether the claimed invention produces a “use, concrete and tangible result”. The test for practical application as applied by the examiner involves the determination of the following factors”

- (a) “Useful” – The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:
  - i. the utility need not be expressly recited in the claims, rather it may be inferred.
  - ii. if the utility is not asserted in the written description, then it must be well established.
- (b) “Tangible” – Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. 101. In *Warmerdam* the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium, which enabled its functionality to be realized.
- (c) “Concrete” – Another consideration is whether the invention produces a “concrete” result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

In the present case, the claimed invention optimizes at least one-resource allocation (i.e., repeatable) and stores results, which appear to be useful, concrete and tangible. Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claim 17 is deemed to be directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al, U.S.

Patent No. 6,138,103.

As per **Claim 17**, Cheng et al disclose a computer implemented method to value at least one resource comprising:

- obtaining at least two scenarios (Col. 4, lines 45-55; Col. 5 line 50-Col. 6 line 15);
- optimizing at least one resource allocation in each said at least two scenarios (Col. 3, lines 21-60; Col. 6 line 64-Col. 7 line 7);
- storing intermediate results resulting from said optimizing (Col. 10, lines 1-5; Col. 11, lines 10-20, tables 2-11);

- obtaining an allocation of at least one resource (Col. 9, lines 35-53);
- evaluating said obtained allocation by using said stored intermediate results (Col. 5, lines 30-37; Col. 6, lines 3-14; Col. 9, lines 35-53);

Cheng et al does not explicitly disclose passing the result of said evaluation to a computer program routine for subsequent handling. However, Cheng et al does disclose that the results are subsequently displayed to the user (Col. 13 line 55-Col. 14 line 30 and Table 11). Thus, examiner submits that it would have been obvious to one of ordinary skill in the art at the time of applicant's invention that Cheng et al discloses a computer program routine for subsequent handling such as displaying the results to the user.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the applicant, in preparing the responses, fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wedelin discloses a method and apparatus for optimizing resource allocation, which uses a probabilistic relaxation network technique for obtaining an optimal solution.
- Ernst discloses a method for the dynamic optimization of business processes by utilizing a workflow management computer system
- Lesaint et al disclose a method for resource allocation incorporating scheduling changes
- Dueck et al disclose a process and system for automatic, computer system supported optimization
- Ulwick discloses a computer based process for strategy evaluation and optimization including a computer-readable medium of instructions for directing a computer to evaluate data for optimizing strategic options.
- Conatser, Kelly, R., discloses mathematical optimization and how it is used to allocate resources.

Art Unit: 3621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley B. Bayat whose telephone number is 571-272-6704. The examiner can normally be reached on Tuesday-Friday 8am-6: 30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 571-272-6712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JAMES P. TRAMMELL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 5000